STATEMENT BY
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In the

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QUALIFICATIONS

My name is Robert H. Leilich and I live in The Woodlands, Texas. I have degrees in Mechanical Engineering, Industrial Management, and Transportation Economics, received from Purdue and Yale Universities. I have over five years of direct railroad operating experience with the former Santa Fe and another 35 years consulting experience with A. T. Kearney, Peat Marwick Mitchell & Co (PMM&Co), and my own (former) firm, Corporate Strategies, Inc. (sold to CANAC in 1999.) Most of my consulting years involved railroad costing issues where, at one time, I was considered to be an expert in the former "Rail Form A" and engineered costing methodologies. I have successfully worked for literally hundreds of clients, including railroads, shippers, and other third parties to resolve cost-based pricing and cost sharing issues. I have testified or submitted verified statements as an expert on railroad costing and economic issues before the former ICC, State Regulatory Agencies, Arbitration Boards, and Federal and District Courts. I have published many articles and given formal presentations on these subject areas. I was also a project manager and lead consultant on a portion of the development of the Uniform Rail Costing System (URCS).

BACKGROUND

The original intent of my PMM&Co staffed URCS study team was to fix known defects in the Rail Form A costing methodology. The ICC, however, wanted to develop a new statistical approach to rail costing that more accurately reflected real costs and the long-term (over one year) variability of those costs. The study team included some of the best statistical experts in the nation. As part of the study, the ICC also wanted a new regulatory chart of accounts which better reflected Generally Accepted Accounting Principles (GAAP). A study team from the former Haskins & Sells had the responsibility of developing the new USOA, to be used as inputs to the new URCS methodology.

There was significant tension between the PMM&Co and Haskins & Sells teams and the ICC on both the development of new Form R-1 USOA and the costing methodology itself. In my opinion, too many of the proposed account definitions did not have the functionality that best reflected the many activities performed by railroads. This tension ultimately led to the restoration of much – but not all – of the function definitions contained in the old USOA. Differing viewpoints among the two study teams and the ICC were never fully resolved.

FUNDAMENTAL PROBLEMS WITH URCS

The biggest flaws in URCS lie in three areas:

- The Uniform System of Accounts;

Problems with statistical analyses; and

Reported Operating Statistics:

USOA. The present USOA is a mixture of category and function based accounting. It was never fully supported by the former Cost Analysis Organization (CAO), formed by the Association of American Railroads (AAR) to, in part, monitor the development of URCS. The ICC heavily restricted, or did not accept the advice and recommendations of the CAO, wary of being accused of being in the hands of the railroads or, as one ICC manager noted, "letting the fox design the security system for the hen house." While this was a legitimate concern, it missed out on some of the value that years of industry costing experience could have contributed. It was my feeling that more public involvement of railroads, the ICC, CAO, shippers, and other interested parties could have contributed to developing a better, more accepted evolutionary approach to railroad costing than developing a totally new approach that few really like, accept, or understand. The old adage, "if it ain't broke, don't fix it applies." A tune-up might have worked better.

Breaking out categories of labor, materials, purchased services, etc. was, in my opinion, a good idea for a number of reasons. Beyond this major change, only few other accounts in the old USOA needed modification to benefit the development of an improved costing methodology. A couple of new accounts were also warranted. A totally new USOA was, in my opinion, overkill and not necessary.

To this day, no Class I railroad uses Form R-1 USOA accounting for its own use. In many cases, numbers are translated by railroads as best they can to fit Form R-1 definitions. I'll never forget the quote of one railroad executive who said to me; "If the ICC wants numbers, we'll give them numbers." While I have no reason to suspect that railroads are not doing their best to make a good translation from their own internal accounting systems, it is likely that some conversions are analogous to pounding a square peg into a round hole.

Statistical Analyses. The second fundamental flaw in URCS is the use of statistical analyses to determine the variability of costs with volume (traffic density) and the production factors related to those variable costs. When the concept was first proposed to me in about 1976, it seemed like a good idea. Then, there were about 55-58 Class I railroads, the diversity of which theoretically formed a good basis for analyzing variability and causal relationships between costs and transportation production units. No one anticipated that the industry would shrink to four mega and one smaller Class I carriers (not counting Canadian Pacific or Canadian National), greatly reducing the statistical sample size.

Not surprisingly, one of the first things the study team found were high levels of statistical auto-correlation. For example, there is a high correlation between fuel consumption and train crew wages. Intuitively, this does not make sense. It does make sense to relate fuel consumption to one or more of gross ton-miles (GTM's), freight car-miles (CM's), locomotive unit-miles (LUM's), etc. Here, however, there is yet another statistical problem in determining which factors are most directly related to fuel consumption because there are also very good statistical relationships (auto-correlation) between each of these same three production units. Some statisticians might say if they all work, then any one of them is good enough. However, this may not work for all kinds of railroad operations.

In relating fuel consumption to units of production, GTM's are the most dominant factor associated with heavy coal trains. For short, fast intermodal trains, CM's and LUM's are more prominent. It was a frustrating experience trying to make statistical relationships work across a broad spectrum of railroad operations with a high degree of statistical confidence. Marginal improvements in "accuracy" were burdened with complexity. The inaccuracy and details of operating statistics simply did not justify pursuing better statistical relationships. Correlations of 80 percent mean that 20 percent of cost relationships are associated with other factors that cannot be identified or explained.

Then, there were many costs that simply could not be statistically nailed down (low correlations) because they were heavily influenced by management decisions or unrelated factors that defied identifying statistical relationships. Track maintenance is one example. Management may defer or accelerate track maintenance. Geography and climate are major influences on track maintenance costs. Ever-changing railroad operations, from heavy coal trains to fast, lighter weight intermodal trains affect track maintenance costs. Track maintenance is a major common cost that is statistically difficult, if not impossible, to apportion in an uncontrolled, ever changing operating environment. Even using weighted averages for three or more years did not resolve the problem.

Many freight car components are swapped out to and from a pool, making the assignment of maintenance by car type difficult to accurately achieve (and assign to one or more causal factors). Railroads typically use standard costs (or AAR Car Repair Billing Cost) to assign repairs to a particular type of car. They are likely to be more accurate than developing costs from URCS.

URCS (and its RFA predecessor) has been roundly criticized by many people, such as Bereskin (Transportation Research Journal), Rhodes & Westbrook (1986) and many others, so it is pointless to rehash what previously has been so eloquently stated or, for that matter, for me to add anything new. For all the time, money and effort that went into developing URCS, I am of the opinion that it does not produce results that are significantly more accurate or reliable than Rail Form A. The fact that many costs in URCS are still based on old RFA allocation procedures (including translating many present Form R-1 USOA numbers back into the old USOA format) strongly suggests that URCS hasn't achieved its goals.

Operating Statistics. The third significant flaw in URCS is that operating statistics are not as accurate as might be desired. Though they are probably better than they have been in the past, problems remain. There is no audit or reconciliation of operating statistics. There are grey areas between switching and running. Work train statistics are likely under reported. Problems in generating operating statistics are particularly evident in the intermodal area. Is an empty container on a flat car considered a load or empty? What about a loaded and empty container on the same car? Is a group of articulated cars considered one or more cars? I don't think this has been fully resolved.

A FUNDAMENTAL RE-ASSESSMENT OF RAIL COSTING PROCEDURES IS NEEDED

So, how do most railroads "do costing?" I, and most railroads, prefer an engineered approach to costing – simple, quick, and good enough for pricing purposes, if not better than using the URCS cost model. Simulation models do a good job of calculating fuel consumption, estimating running times, and calculating operating statistics for a movement. Most avoidable costs can be quickly and fairly accurately

determined, given a good description of the operation and the profile of the route. "Softer" costs that are common to multiple services (such as track maintenance) can be allocated using one of a variety of approaches (for which there are many). For some other costs, standard allowances may suffice. As a last resort where no better information is available, system or regional average" costs may suffice.

The old RFA formula, developed and refined over many years, took USOA reported operating expenses and separated them into fixed and variable components using fixed percentages that did not reflect traffic density. Variable costs were apportioned to the most logical assignment of causal factors – such as GTM's, LUM's, CM's, etc. – to develop unit costs. Some simple statistical approaches (by today's standards) were used to determine a single fixed-point variability ratio for cost categories and apportion variable costs among production units.

While I support the merits of discontinuing the use of (single) "point" variabilities, URCS more sophisticated statistical approach still does not consider that costs by category may have different degrees of variability or that changes in variability may not be linear with changes in volume (density).

Academic and other criticisms of the RFA methodology led to the development of URCS. Its history of use and exposure to examinations has not affirmed costing results to be more accurate or reliable. A large number of proposed alternative approaches to rail costing all suggest that there is not – and likely never will be – a universally accepted approach to rail costing. It raises the question then, why make costing so difficult? Can't we use a relatively straight forward approach to developing relatively easily identified and non or minimally-arguable avoidable costs and then add components that may be more subject to arguable assignment? If the latter are not as significant as easily defined costs, then they may not be worth arguing over.

In short, I believe that a more down to earth, practical oriented approach to railroad costing (as opposed to a heavily academic oriented approach that is difficult to administer and more difficult to understand) is desirable. It should be easily modifiable as specific circumstances might warrant. It should be understandable and reasonable. I believe that the use of "system average" costs is necessary only when there are no better numbers are available or cannot be developed. *The art involved in railroad costing can never be fully replaced by a science.* The best costing methodology, in my opinion, is a blended approach, where avoidable costs are easily determined and to which additional variable costs are assigned through the use of informed common sense, fair and reasonable empirical standards. Statistical analyses should have a role, but not be used to override the use of reasonableness or, in some cases, simplicity.

I am confident that if knowledgeable costing people from the industry, shippers, and the STB were to work together in a public forum, with inputs from academics who have a good theoretical knowledge (but less practical knowledge of railroading), then a more workable costing methodology, more easily understood and flexible, could be developed. If nothing else, I base this proposal on my many years of rail costing and successfully negotiating many contracts or resolving disputes without the necessity of regulatory adjudication.

RESPONSE TO SPECIFIC ISSUES

From my experiences, I offer the following comments relative to some of the specific issues noted in the STB's request for input:

1. Efficiency Adjustments Associated With Unit-Trains and Multi-Car Movements.

I have never strictly used RFA or URCS costing methodologies for costing unit-trains or large multi-car movements. In most cases, volumes are sufficient to justify an engineered approach to costing, using readily available simulation models and other information, using system-average costs only where no better information is available or can be developed. In the dozens of negotiations in which I have been directly involved, I have achieved a near 100 percent success rate using engineered costs. I believe many other costing experts have achieved similar results. I do not understand the merits of "efficiency adjustments" where, in my opinion, they are not necessary and are effectively inherent in an engineered costing approach.

2. Update Historical Studies

The best approach, of course, is direct observation. A second, less accurate alternative is to use standard times or costs (unit times or unit costs multiplied by number of units) for a variety of operations, such as switching. A new approach to developing switching times, using real-time yard environment simulation models such as one developed by P. I. Engineering (Williamston, Michigan) should be considered. A switching simulation model can be an extremely useful, inexpensive tool for realistically estimating switching times for an unlimited number of real-life situations – even for specific cases submitted to the STB for resolution.

3. Improve TOFC/COFC Costing

Improvements in this area have long been needed. It starts with better reporting of TOFC/COFC movement statistics, perhaps some more accounting breakout of TOFC/COFC operating costs, and possibly the use of TPC (Train Performance Calculator) simulation models to differentiate resource consumption (such as fuel and time) associated with trainload and multiple car movements of this class of traffic.

8. Average Switch Engine Speeds

See my comments in Item 2 with respect to use of simulations.

12. Indexing URCS

It is my understanding the railroad industry has never accepted the RCAF. For the STB to use it would introduce further contention in costing issues. If the lag in developing regulatory (URCS) unit costs were reduced, the need for using RCAF indices would be reduced. In my opinion, the use of more current data is preferable than relying on indices for which there is no universal acceptance.

13. Update Various Statistical Relationships

I believe my earlier comments offer some of my reflections on the subject. Not being a statistician, I cannot offer specific comments. I only note the frustration associated with prior efforts to use a statistical approach. I also note that many expert statisticians have written and published difficult to understand studies on the subject. I do not see a consensus on any approach or a clear, superior methodology. This is not to say that the subject should not be revisited, and I would highly encourage the STB to take a fresh look at this matter now that we have had some 25 plus years experience with URCS. The role of attempting to determine statistical relationships should be placed in the context of a real correlation to production factors and their real contribution to more accurate costing. Statistical averages, however, are no substitute for the ability to determine real avoidable costs.

Thank you for the opportunity to submit my comments and suggestions.